

REMARKS

Claims 5-10 are pending in this application. By this Amendment, claims 1-4 are cancelled without prejudice to or disclaimer of the subject matter contained therein, and claims 5-10 are added to recite features supported in the specification at, for example, page 11, lines 3-9; page 21, line 9 – page 23, line 5; page 24, line 25 – page 25, line 21 and Figs. 5 and 6, as well as include features from cancelled claims 1, 3 and 4. No new matter is added by any of these amendments. Reconsideration is respectfully requested.

The Office Action rejects claims 1 and 2 under 35 U.S.C. §102(e) over U.S. Patent 6,573,928 to Jones *et al.* (hereinafter “Jones”). The Office Action further rejects claims 3 and 4 under 35 U.S.C. §103(a) over Jones in view of JP Hei-11-027607(A) to Tabei *et al.* (hereinafter “Tabei” and incorrectly identified in the Office Action by the given name Yusuke). These rejections are rendered moot by the cancellation of claims 1-4. Applicants respectfully request withdrawal of the rejections under §§102 and 103.

Jones and Tabei, alone or in combination, do not teach or suggest a game apparatus comprising a game image generating section for generating n viewing images for every frame when a game space is viewed from n viewpoints, in order to enable a player to recognize the game space three-dimensionally by use of binocular parallax, an input image storage memory comprising storage areas for storing the n viewing images exclusively by each viewing image, respectively, the viewing images being generated by the game image generating section for every frame, an interleaver for generating the stereoscopic image to be displayed on an n-type of stereoscopic image display apparatus for every frame by sampling image data which are stored in a predetermined storage address of the storage areas, from the storage areas of the input image storage memory for every frame, respectively and by interleaving the viewing images in parallel, and a display control section for renewing display of an image to enable the player to recognize the game space three-dimensionally by use of binocular parallax for

every frame to control display of a three-dimensional dynamic image in the game space by taking control as to display the stereoscopic image generated by the interleaver on the stereoscopic image display apparatus, as recited in claim 5. Applicants' claimed features provide for a game apparatus that generates a three-dimensional image that enables a player to recognize a game space three-dimensionally, and these features are absent in Jones and Tabai. These reasons apply by extension to claim 6 based on its dependence from claim 5.

Nor do Jones and Tabai teach or suggest a apparatus comprising a frame buffer for storing a frame of stereoscopic images therein, a viewing image generating section for sequentially generating n viewing images for enabling a user to recognize a three-dimensional image using binocular parallax and generating the n viewing images for every frame, a determining section for determining whether each of the viewing images sequentially generated by the viewing image generating section is a first viewing image for the frame, a first viewing image storing section for storing the viewing image in the frame buffer by overwriting in response to the determining section determining that the viewing image is the first viewing image, an interleaving storing section for interleaving the viewing image and an image stored in the frame buffer and for storing an interleaved image in the frame buffer by overwriting in response to the determining section determining that the viewing image is not the first viewing image, and a display control section for determining whether the image stored in the frame buffer is an image made by interleaving the n viewing images, and for renewing display for every frame by taking control so as to renew display of an n-eye type of stereoscopic image display apparatus by the image stored in the frame buffer in conjunction with the image made by interleaving the n viewing images, to enable the user to recognize a three-dimensional dynamic image by use of binocular parallax, as recited in claim 7.

Applicants assert that while Jones employs a plurality of memories, Applicants' claimed features provide carrying out the processing by use of only one frame buffer, achieved by

pipeline processing, and these features are absent in Jones and Tabai. These reasons apply by extension to claim 8 based on its dependence from claim 7.

Further, Jones and Tabai fail to teach or suggest game apparatus comprising a frame buffer for storing a frame of stereoscopic images therein, a game image generating section for sequentially generating n viewing images when a game space is viewed from n viewpoints and for generating the n viewing images for every frame in order to enable a player to recognize the game space three-dimensionally by use of binocular parallax, a determining section for determining whether each of the viewing images sequentially generated by the game image generating section is a first viewing image for the frame, a first viewing image storage section for storing the viewing image in the frame buffer by overwriting in response to the determining section determining that the viewing image is the first viewing image, an interleaving storage section for interleaving the viewing image and an image stored in the frame buffer and for storing an interleaved image in the frame buffer by overwriting in response to the determining section determining that the viewing image is not the first viewing image, and a display control section for determining whether the image stored in the frame buffer is an image made by interleaving the n viewing images, and for renewing display of an image for enabling the player to recognize the game space three-dimensionally by use of binocular parallax for every frame by taking control so as to renew display of an n -eye type stereoscopic image display apparatus by the image stored in the frame buffer in response to the image made by interleaving the n viewing images, to control display of a three-dimensional dynamic image of the game space, as recited in claim 9. Applicants' claimed features provide for a game apparatus that generates a three-dimensional image that enables a player to recognize a game space three-dimensionally, as well as achieves pipeline processing by use of only one frame buffer, and these features are absent in Jones and Tabai. These reasons apply by extension to claim 10 based on its dependence from claim 9.

Instead, Jones discloses a stereoscopic display controller. In particular, Jones teaches a memory management system 24 connected to memories 22, 23 and a video controller 26 that includes a color swap circuit 29 and a latch circuit 30 and receives pixel data from the memories 22, 23. Jones further teaches the latch circuit 30 as including latches 40, 41 connected to switching circuits 42, 43, 44 and to an OR gate 45, which is connected to an XOR gate 46 both in the color swap circuit 29 (col. 8, lines 47-65, col. 9, lines 28-40). In addition, Jones teaches that the memory management system 24 is connected to two pairs of half row buffers 52, 53 for interleaving the output by alternating rows data being read into the buffers and Figs. 6a-6b and 20 of Jones).

However, Jones provides no teaching or suggestion for stereoscopic imaging using binocular parallax for every frame and instead touts cross-talk reduction as a significant advantage of the teachings therein (col. 11, lines 48-67 of Jones). Thus, Applicants submit that Jones not only fails to teach all the features recited in the added claims, but lacks motivation to suggest the advantages derived therefrom.

Moreover, a claim must be literally disclosed for a proper rejection under §102. This requirement is satisfied “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference” (MPEP §2131). Applicants assert that the Office Action fails to satisfy this requirement with Jones regarding any of the added claims.

Tabei does not compensate for the deficiencies of Jones regarding any of the added claims. Instead, Tabei discloses a display device 1 that includes a lenticular lens 3 and a screen 5. In particular, Tabei teaches the lenticular lens 3 includes a plurality of cylindrical lenses to refract the images in order to display alternate images portion depending on the direction of view (paragraphs [0022] – [0024] and drawing 1 of Tabei).

Applicants respectfully submit that the Office Action has failed to set forth a proper motivation for making the proposed combination. The motivation set forth in the Office Action is “to provide the benefit of providing a gaming stereoscopic display environment that can accommodate multiple users each having separate visual presence at different direction on a single display screen.” However, the Office Action also specifically states that Tabei teaches an “image generating apparatus that incorporates a game image generating section for generating game images corresponding to n viewpoints for every frame.” Therefore, the motivation set forth in the Office Action is nothing more than a statement of what can be achieved by Tabei alone, and therefore is fundamentally improper.

It is well established that a showing of a suggestion, teaching or motivation to combine the prior art references is an essential evidentiary component of an obviousness holding (See *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1255, 1232 (Fed. Cir. 1998)). This showing must be clear and particular, and broad conclusory statements about the teachings of multiple references, standing alone, are not “evidence” (See *In re Dembiczak*, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617). Accordingly, the Office Action has failed to make out a *prima facie* case of obviousness.

For at least these reasons, Applicants respectfully assert that the added independent claims are patentable over the applied references. The dependent claims are likewise patentable over the applied references for at least the reasons discussed, as well as for the additional features they recite. Consequently, all the claims are in condition for allowance.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 5-10 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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